A Step-by-step Guide to Building Your Own Wood Fence

BUILD A SHADOWBOX PRIVACY FENCE

By Matt Weber

A fence can add a lot to a landscape. A fence can divide property lines, boost home equity, add to the outdoor decor and—as in our case—safely contain animals.

The animal in question is Raleigh, a goofy, brown coiler spaniel. My wife and I have recently moved to a new house and bought the dog along. Raleigh had grown accustomed to running freely throughout the yard, because our previous country home was safely secluded from traffic. However, the new house in the suburbs is on a much busier street, requiring the wife or I to walk the dog on a leash each time he needs to potty. This is an aggravatingly repetitive and increasingly uncomfortable in cold weather. We decided it would be nice just to shove the dog out the door while we play in the house, but we needed a way to keep him out of traffic. That was the genesis of our fence project.

DESIGN & MATERIALS

When it comes to constructing a fence, you have a ton of options to consider for materials and design. Fence materials range from metal and wood to vinyl and wood-plastic composites. For an easy to build fence, you might consider using pre-assembled panels, which can dramatically reduce the time you’ll spend building.

However, if your yard is sloped, then to keep the panels level you’ll have to stagger the panel heights where they fasten to the posts.
We opted to build a wood privacy fence from the ground up, which would closely follow the grade of the yard and secure the dog from the perils of suburbia. For our picket design, we chose a shadowbox style, which alternates the position of the pickets from one side of the stringer to the other—a feature we felt added extra depth to the design. For the framing lumber, we visited our local Lowes to pick up 8 ft. 4x4x4 posts and Baltic 2x4s for stringers, all pressure-treated for outdoor use, with the posts repositioned for ground contact.

Mark off your fence layout with stakes and twine. Pull the line tightly between corner stakes, then stake the line intermittently.

For the fence boards or "pickets," we used a species of wood that is often overlooked these days: Cypress. Cypress is actually a soft wood, although it grows alongside hardwoods and is usually grouped and manufactured with them. According to the Southern Cypress Manufacturers Association (www.cypressinfo.org), the wood’s natural durability is a big benefit for exterior applications. Cypress generates cypressene, its own preservative oil, which makes its heartwood naturally resistant to

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**PLANNING THE LAYOUT**

To a large degree, the construction and style of your fence is up to you, but always check with local officials regarding building codes and any necessary permits. Some neighborhoods may also have certain architectural guidelines or "covenants" that restrict design, and of course you'll need to double check that the location of your proposed fence is not on a neighbor's property. It's also wise to locate any underground utilities as not to dig into disaster. You can use "R1" nationally to get underground utility lines, cables and pipes marked for free.

With that said, the height, design and trajectory of your fence are up to you, and may be dictated by other obstacles in your yard, such as trees and sheds. For my fence, I ran 12 feet out from the front corner of my house (enclosing a side door), made a 90-degree turn and ran the side of the fence square with the house, parallel to the house wall. I located it in a large section of the backyard and ended the fence at the wall on the opposite side of the house. My design is just an example. Although your fence styles may differ dramatically, the basic steps in fence construction remain the same.

First, mark your layout with stakes and string. A stake should be placed precisely at every corner post as well as intermittently along the fence perimeter to keep the string tight and straight. With the layout completely tied with string, walk the perimeter with a tape measure and snap point, painting a large "X" to pinpoint the precise placement of each fence post.

Fence posts are usually 6 to 8 feet in diameter. The closer the fence posts, the stronger the fence. This measurement is also crucial for the sake of your materials, because dimensional lumber is sold in standard sizes. Be, if your posts are accidentally spaced 6 feet, 1 inch apart, then an 8-foot board will be too...
BUILD A SHADOWBOX PRIVACY FENCE

line, which will help prevent frost heaving. Additionally, dig an extra 4 to 6 inches deeper than the desired depth of the post to place a bed of gravel beneath the post for drainage. Sounds like a lot of digging, right? It is.

A traditional way to dig a post hole is with a manual clamshell digger and a trench shovel. These tools are tried and true tools, but if using them, expect to spend many hours, days, or even weeks digging your holes, depending on the size of your fence.

To speed up the digging process, I highly recommend using a post hole digger attached to a power auger. Hiring a power auger and renting another worker to help street it faster. Although, "one-man augers" are available to rent, my experience is these "one-man" models are nothing more than smaller poorly designed machines that still require a second worker to control—and awkwardly, at that. The two-man models are pricier, though, and with the help of a friend, we had the holes completed in a single afternoon.

While digging, we were also soaking the base of the posts in water prior to placing them upright in the bucket at one end. Their mass displaces the water which rises to the top of the bucket, soaking the bottoms of the posts. After soaking for about an hour, we would rotate four new posts into the bucket to soak.

To set the posts, start by filling the bottom 4 to 6 inches of the hole with gravel, which will allow some degree of drainage to help prevent rot at the base of the post. It's important to set all the corner posts first. If you have a helper, they can hold the post upright while you use a hand level to make sure it is plumb. A post level is also helpful because it straps around the post while allowing level reads on two sides of the post. A post level frees your hands, which is very helpful if you're setting the posts alone.

Once you've established that the post is plumb left to right and back to front, you're ready to add concrete. However, you must brace the post in place while you add the concrete. If you have a helper, they can hold it for you. Otherwise, you'll need to nail some scrap lengths of wood (use 1 by 4s) that extend from the post to the ground to act as movable braces, with the nails serving as their pivot point for adjustment. Plumb the post, adjust the braces to hold it plumb, and then add the concrete. Use a single hammer to pound the posts into the ground once surrounded by concrete, then recheck for plumb and adjust if necessary. It's a good idea to leave the braces in place while the concrete sets.

Another handy device for setting the posts is the Post-Pod from Cepco Tool. This is a real timesaver, and it works by using the weight of the pod to sink the post into the ground. Simply set the pod on top of the post and then add concrete around the post. The weight of the pod will push the post down into the concrete, and the concrete will fill in the gap. Once the concrete has set, you can remove the pod, and the post will be set in its final position.
BUILD A SHADOWBOX PRIVACY FENCE

NAILING THE STRINGERS
For this shadow box fence I positioned the bottom stringer 10 inches up from the ground. The other two stringers were evenly spaced 23 inches apart. You may need to alter placement, depending on the height of your fence.

To prevent repetitive measurements, I made a story pole from a scrap piece of wood. I marked the position of each stringer on the pole with masking tape. I then placed the pole alongside each post and used the tape to determine each stringer location, marking it with pencil.

You have many options for attaching your stringers, such as face-nailing, mortise and tenon, or screwing. For the shadow box style, I chose to toenail the stringers, by placing the 2x4's.

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86

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of an air compressor. Plus, there's no need for a compressor, an air hose or extension cord (which may weaken the compression). When working in remote areas, the compressed air is sent of a generator, and eliminates all the elbow-thrashing work of the hand-powered method.

I used Paslode's 3-inch ring Shank 6-gaiged nails for the stringers and the 2-inch versions when nailing the fence boards.

One more note on stringers future uplift. Cut the ends at an angle so they fit flush between the posts. Here's a tip for how to do so. First, butt the square end of one uncut stringer against the penciled location on your left-hand post. Hold that end firmly against the post while you position the other end of the stringer so it overlaps the right hand post at the pencil mark. Mark the stringer using the post as a pencil guide. Remove the stringer and take to the cutting table.

Assuming your right-hand post sits at a different height than your left-hand post, the mark should be at an angle. Use an angle finder to transfer that angle to the left-hand end of the stringer. Slide the corner and cut off just enough material to match the angle. Now, measure the length of that angle cut. Go back to your right-hand angle mark. Keeping the same angle, retrace that mark, moving it over the same distance as the width of the cut on the left-hand side (plus 1/8 inch for blade kerf). This will compensate for that lack of material. Cut the stringer and install.

With all stringers in place, I then used a reciprocating saw to cut the tops of the posts so they were all the same height. When cutting the posts, it's smart to do so in a manner that diverts water from standing atop the posts, which could contribute to rot. You can cut preaminted crown, cover them with post caps, or just slice them off at an angle like I did.

INSTALLING THE FENCE BOARDS

The fence boards or pickets is actually one of the simpler phases of construction. I cut the custom spacing block slightly narrower than the width of the fence boards, so there would be a gap of about 1/4-inch of overlap among the alternating pickets.

I placed the first board along the corner post and used a 4-foot level to find plumb. Nail it home, using two nails per stringer location. Place the sparring bracing next to the first fence board and position the second picket against it. Drive one nail at the top stringer. Use that nail as a pivot while you find plumb, then hit that picket home with it. Follow suit close the stringer, in case your fence boards vary somewhat in height, keep an eye on the tops so they line up consistently and adjust their placement against the ground if necessary.

Once you reach the next post, return to the first post on the opposite side of the fence. On the opposite side of the stringer, you will center a picket across from each space provided by your spacing block to achieve the alternating shadowbox style. Install the boards in the same manner, spacing, plumbing and nailing. Then repeat the same process for each set of stringers as you move down the fence.

FINISHING TOUCHES

I would highly encourage you to pressure-wash your fence with waterproofer and/or stain before assembling the fence. It's much easier than staining the fence once it's in place. However, I didn't do that here, due to a combination of editorial due dates and inclement spring weather. I needed to assemble the fence for the purposes of this magazine article, and while I could build it in the rain, I couldn't stain it in the rain. Suffice it to say that there is a lot of this fence left unassembled and unphotographed, which I plan to pre-treat before assembling. That being said, a quality wood treatment will help add your preferred color tone as well as help to protect against rotting, water damage and damaging UV rays. I used Armstrong-Clark's semi-transparent Sierra Redwood tone, for a deep tone that will match the exterior house trim. I hope to test next season. But that's another story.

For more tips and advice on how to build a fence, including ideas on gate construction and tips on building other styles of fence, visit www.extremehowtocom.